

## WHOLE WAFER MEMS RELEASE PROCESS

### Abstract

A process for manufacturing a wafer having a multiplicity of MEMS devices such as mirrors with gimbals formed thereon is disclosed. The devices on the wafer include features defined by a wide line between features which extend completely through the wafer, and have a ratio of greater than about 4:1 with respect to the narrow lines which separate individual devices. Each individual device is separated by narrow gaps or line widths which are, for example, about 10 $\mu$ m. Thus, the etching process is controlled such that the features defined by the wide lines are etched completely through, whereas the individual devices are separated by narrow lines which are not etched completely through the wafer. Therefore, the multiplicity of devices remain attached together even after the wafer is released from a backing wafer. Thus, the wafer with the many devices still attached together allows further processing such as packaging, testing, transport, etc. without the required handling of individual devices.